

CLAIMS

WHAT IS CLAIMED:

1. An apparatus, comprising:

5 a first component, said first component adapted to be coupled to a second component;
an outer collar positioned around said first component, said outer collar adapted to be
threadingly coupled to said second component; and
a plurality of collet fingers positioned between said outer collar and said first
component, said outer collar having a surface that is adapted to engage said
10 collet fingers and urge said collet fingers into engagement with said first and
second components when said outer collar is threadingly coupled to said
second component.

2. The apparatus of claim 1, wherein said first component is comprised of at least
15 one of a Christmas tree, a riser and a wellhead.

3. The apparatus of claim 1, wherein said second component is comprised of at
least one of a Christmas tree, a riser and a wellhead.

20 4. The apparatus of claim 1, further comprising means for coupling said outer
collar to said first component.

25 5. The apparatus of claim 4, wherein said means for coupling said outer collar to
said first component comprises a split ring that is positioned around said first component and
threadingly coupled to said outer collar by a plurality of threaded fasteners.

6. The apparatus of claim 4, wherein said means for coupling said outer collar to said first component comprises an externally threaded split ring that is adapted to threadingly engage internal threads formed on said collar.

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7. The apparatus of claim 1, further comprising a means for retaining said outer collar in a retracted position.

8. The apparatus of claim 7, wherein said means for retaining said outer collar in a retracted position comprises a plurality of threaded devices that are positioned in openings formed in said outer collar, said threaded devices adapted to engage a portion of said first component.

9. The apparatus of claim 1, further comprising a plurality of threaded devices positioned in openings formed in said outer collar, said threaded devices being adapted to engage at least one of said plurality of collet fingers.

10. The apparatus of claim 1, wherein said surface of said collar that engages said plurality of collet fingers comprises a substantially cylindrical surface.

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11. The apparatus of claim 1, wherein said surface of said collar that engages said plurality of collet fingers comprises a tapered surface.

25 12. The apparatus of claim 1, wherein said collet fingers comprise a lip and said surface of said collar that engages said plurality of collet fingers comprises a tapered surface.

13. The apparatus of claim 1, wherein each of said collet fingers has a first tapered surface that is adapted to engage a tapered surface formed on said first component.

5 14. The apparatus of claim 13, wherein each of said collet fingers has a second tapered surface that is adapted to engage a tapered surface formed on said second component.

10 15. The apparatus of claim 1, wherein each of said collet fingers comprises first and second lugs, wherein said first lug is adapted to engage said first component and said second lug is adapted to engage said second component when said collet fingers are in an installed position.

15 16. The apparatus of claim 1, wherein each of said collet fingers is comprised of a first plurality of lugs and a second plurality of lugs, wherein said first plurality of lugs are adapted to engage said first component and said second plurality of lugs are adapted to engage said second component when said collet fingers are in an installed position.

20 17. The apparatus of claim 5, wherein said split ring has a surface that is adapted to engage a shoulder formed on said first component when said outer collar is moved to an installed position.

18. The apparatus of claim 1, wherein said outer collar is threadingly coupled to said second component by engagement of an internal threaded surface on said outer collar with an externally threaded surface on said second component.

19. An apparatus, comprising:

a first component, said first component adapted to be coupled to a second component;
an outer collar positioned around said first component, said outer collar adapted to be
threadingly coupled to said second component; and

5 a plurality of collet fingers positioned between said outer collar and said first
component, said outer collar having a substantially cylindrical surface that is
adapted to engage said collet fingers and urge said collet fingers into engage-
ment with said first and second components when said outer collar is thread-
ingly coupled to said second component, wherein each of said collet fingers
has a first tapered surface that is adapted to engage a tapered surface formed
10 on said first component and each of said collet fingers has a second tapered
surface that is adapted to engage a tapered surface formed on said second
component.

15 20. The apparatus of claim 19, wherein said first component is comprised of at
least one of a Christmas tree, a riser and a wellhead.

21. The apparatus of claim 19, wherein said second component is comprised of at
least one of a Christmas tree, a riser and a wellhead.

20 22. The apparatus of claim 19, further comprising means for coupling said outer
collar to said first component.

23. The apparatus of claim 22, wherein said means for coupling said outer collar to said first component comprises a split ring that is positioned around said first component and threadingly coupled to said outer collar by a plurality of threaded fasteners.

5 24. The apparatus of claim 22, wherein said means for coupling said outer collar to said first component comprises an externally threaded split ring that is adapted to threadingly engage internal threads formed on said collar.

10 25. The apparatus of claim 19, further comprising a means for retaining said outer collar in a retracted position.

15 26. The apparatus of claim 25, wherein said means for retaining said outer collar in a retracted position comprises a plurality of threaded devices that are positioned in openings formed in said outer collar, said threaded devices adapted to engage a portion of said first component.

20 27. The apparatus of claim 19, further comprising a plurality of threaded devices positioned in openings formed in said outer collar, said threaded devices being adapted to engage at least one of said plurality of collet fingers.

28. The apparatus of claim 19, wherein said collar further comprises a tapered surface that is adapted to engage said plurality of collet fingers.

25 29. The apparatus of claim 28, wherein said collet fingers comprise a lip and said tapered surface of said collar engages said lip of said plurality of collet fingers.

30. The apparatus of claim 23, wherein said split ring has a surface that is adapted to engage a shoulder formed on said first component when said outer collar is moved to an installed position.

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31. The apparatus of claim 19, wherein said outer collar is threadingly coupled to said second component by engagement of an internal threaded surface on said outer collar with an externally threaded surface on said second component.

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32. An apparatus, comprising:

a first component, said first component adapted to be coupled to a second component; an outer collar positioned around said first component, said outer collar adapted to be threadingly coupled to said second component; and means for clamping said first component to said second component, said means for clamping being positioned between said outer collar and said first component, said outer collar having a surface that is adapted to urge said means for clamping into engagement with said first and second components when said outer collar is threadingly coupled to said second component.

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20 33. The apparatus of claim 32, wherein said means for clamping comprises a plurality of collet fingers.

25 34. The apparatus of claim 32, further comprising means for coupling said outer collar to said first component.

35. The apparatus of claim 32, further comprising a means for retaining said outer collar in a retracted position.

36. An apparatus, comprising:

5 a first component, said first component adapted to be coupled to a second component;
an outer collar positioned around said first component, said outer collar adapted to be
threadingly coupled to said second component;
means for coupling said outer collar to said first component;
means for retaining said outer collar in a retracted position; and
10 a plurality of collet fingers positioned between said outer collar and said first component, said outer collar having a surface that is adapted to engage said collet fingers and urge said collet fingers into engagement with said first and second components when said outer collar is threadingly coupled to said second component.

15 37. The apparatus of claim 36, wherein said means for coupling said outer collar to said first component comprises a split ring that is positioned around said first component and threadingly coupled to said outer collar by a plurality of threaded fasteners.

20 38. The apparatus of claim 36, wherein said means for coupling said outer collar to said first component comprises an externally threaded split ring that is adapted to threadingly engage internal threads formed on said collar.

25 39. The apparatus of claim 36, wherein said means for retaining said outer collar in a retracted position comprises a plurality of threaded devices that are positioned in

openings formed in said outer collar, said threaded devices adapted to engage a portion of said first component.

40. The apparatus of claim 36, further comprising a plurality of threaded devices 5 positioned in openings formed in said outer collar, said threaded devices being adapted to engage at least one of said plurality of collet fingers.

41. The apparatus of claim 36, wherein said outer collar is threadingly coupled to said second component by engagement of an internal threaded surface on said outer collar 10 with an externally threaded surface on said second component.

42. A method of coupling a first component to a second component, comprising: 15 rotatably coupling a rotatable outer collar to said first component, wherein a plurality of collet fingers are positioned between said rotatable outer collar and said first component;

positioning said first component adjacent said second component; and 20 rotatably coupling said outer collar to said second component, wherein a surface of said outer collar urges said collet fingers into engagement with said first and second components.

43. The method of claim 42, further comprising urging a plurality of threaded devices positioned in said outer collar into engagement with said collet fingers.

44. The method of claim 42, wherein rotatably coupling said rotatable outer collar to said first component comprises threadingly coupling a split ring to said outer collar using a plurality of threaded fasteners.

5 45. The method of claim 42, wherein rotatably coupling said rotatable outer collar to said first component comprises threadingly coupling an externally threaded split ring to an internally threaded portion of said rotatable outer collar.

10 46. The method of claim 42, wherein rotatably coupling said outer collar to said second component comprises threadingly coupling an internally threaded portion of said collar with an externally threaded portion of said second component.

15 47. A method of coupling a first component to a second component, comprising:
rotatably coupling a rotatable outer collar to said first component, wherein a means
for clamping said first and second components together is positioned between
said rotatable outer collar and said first component;
positioning said first component adjacent said second component; and
rotatably coupling said outer collar to said second component, wherein a surface of
said outer collar urges said means for clamping into engagement with said first
20 and second components.

48. The method of claim 47, wherein said means for clamping comprises a plurality of collet fingers.

49. The method of claim 47, further comprising urging a plurality of threaded devices positioned in said outer collar into engagement with said means for clamping.

5 50. The method of claim 47, wherein rotatably coupling said rotatable outer collar to said first component comprises threadingly coupling a split ring to said outer collar using a plurality of threaded fasteners.

10 51. The method of claim 47, wherein rotatably coupling said rotatable outer collar to said first component comprises threadingly coupling an externally threaded split ring to an internally threaded portion of said rotatable outer collar.

52. The method of claim 47, wherein rotatably coupling said outer collar to said second component comprises threadingly coupling an internally threaded portion of said collar with an externally threaded portion of said second component.